R1G220-RD61-03

EC centrifugal fan - RadiCal

backward-curved, single-intake

Automotive

R1G220-RD61-03 ebmpapst Datasheet
sales@fansco.com
www.fansco.com

Nominal data

Type	**R1G220-RD61-03**
Motor	**M1G074-BF**

Nominal voltage	VDC	12
Nominal voltage range	VDC	8 .. 16
Method of obtaining data		fa
Speed (rpm)	min^{-1}	2700
Power consumption	W	90
Current draw	A	8.6
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	60

ml = Max. load · me = Max. efficiency · fa = Free air · cs = Customer specification · ce = Customer equipment
Subject to change

EC centrifugal fan - RadiCal

backward-curved, single-intake

Automotive

Technical description

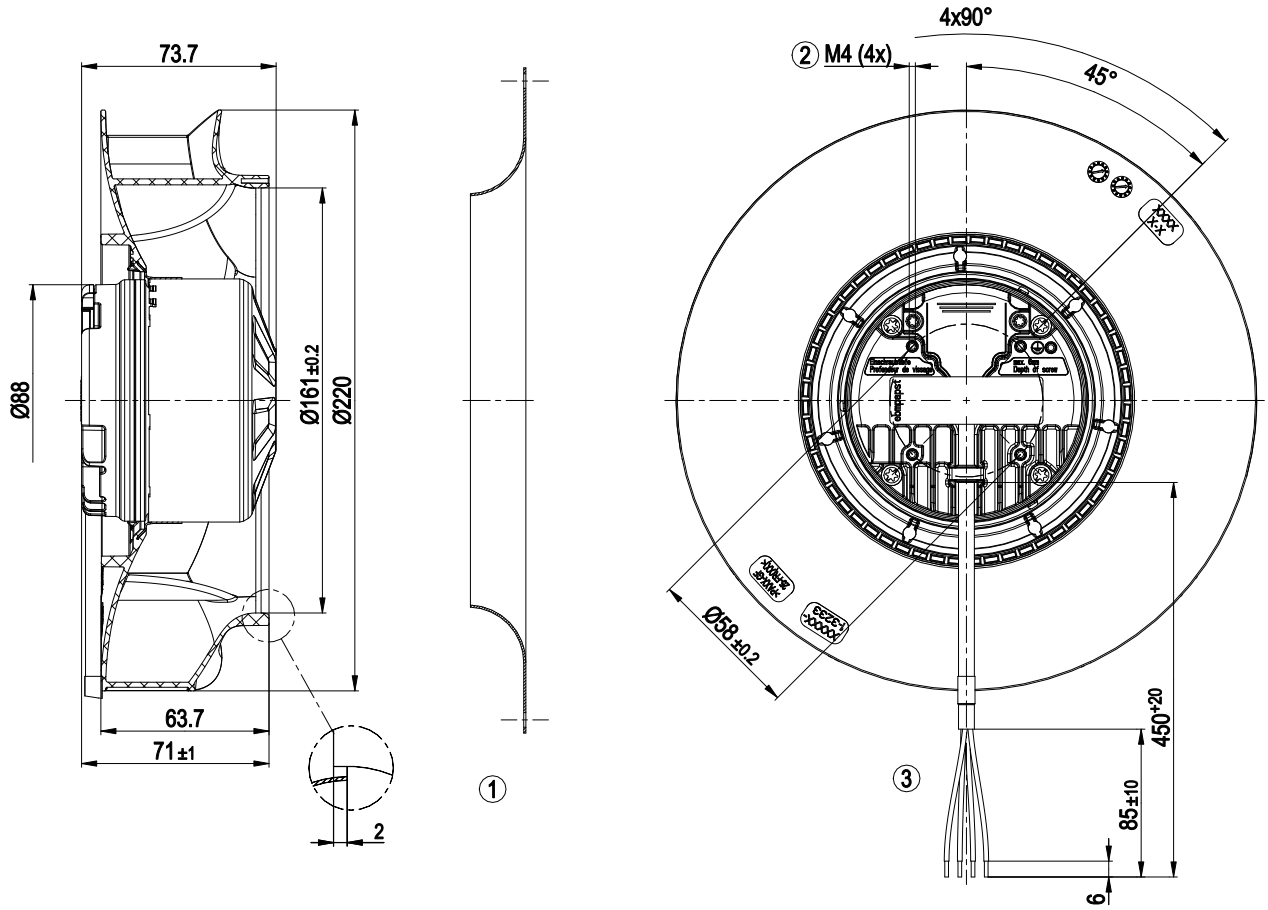
Weight	1.5 kg
Size	220 mm
Motor size	74
Rotor surface	Galvanized
Electronics housing material	Die-cast aluminum, painted black
Impeller material	PA plastic
Number of blades	7
Direction of rotation	Clockwise, viewed toward rotor
Degree of protection	Motor IP24 KM, electronics IP6K9K (mating connector installed)
Insulation class	"B"
Moisture (F) / Environmental (H) protection class	H4
Ambient temperature note	Occasional start-up at temperatures between -40°C and -25°C is permitted. For continuous operation at ambient temperatures below -25°C (such as refrigeration applications), use must be made of a fan design with special low-temperature bearings.
Max. permitted ambient temp. for motor (transport/storage)	+80 °C
Min. permitted ambient temp. for motor (transport/storage)	-40 °C
Installation position	Shaft horizontal or rotor on bottom; rotor on top on request
Condensation drainage holes	On rotor side
Mode	S1
Motor bearing	Ball bearing; (sealed)
Technical features	- Tach output - Motor current limitation - Soft start - Control input 0-10 VDC / PWM - Overvoltage detection - Reverse polarity protection
With cable	Axial
Protection class assignment	III; Requires supply with safety extra-low voltage SELV. This component for installation may have several local protection classes. This information relates to this component's basic design. The final protection class is based on the component's intended installation and connection.
Approval	EAC

EC centrifugal fan - RadiCal

backward-curved, single-intake

Automotive

Product drawing



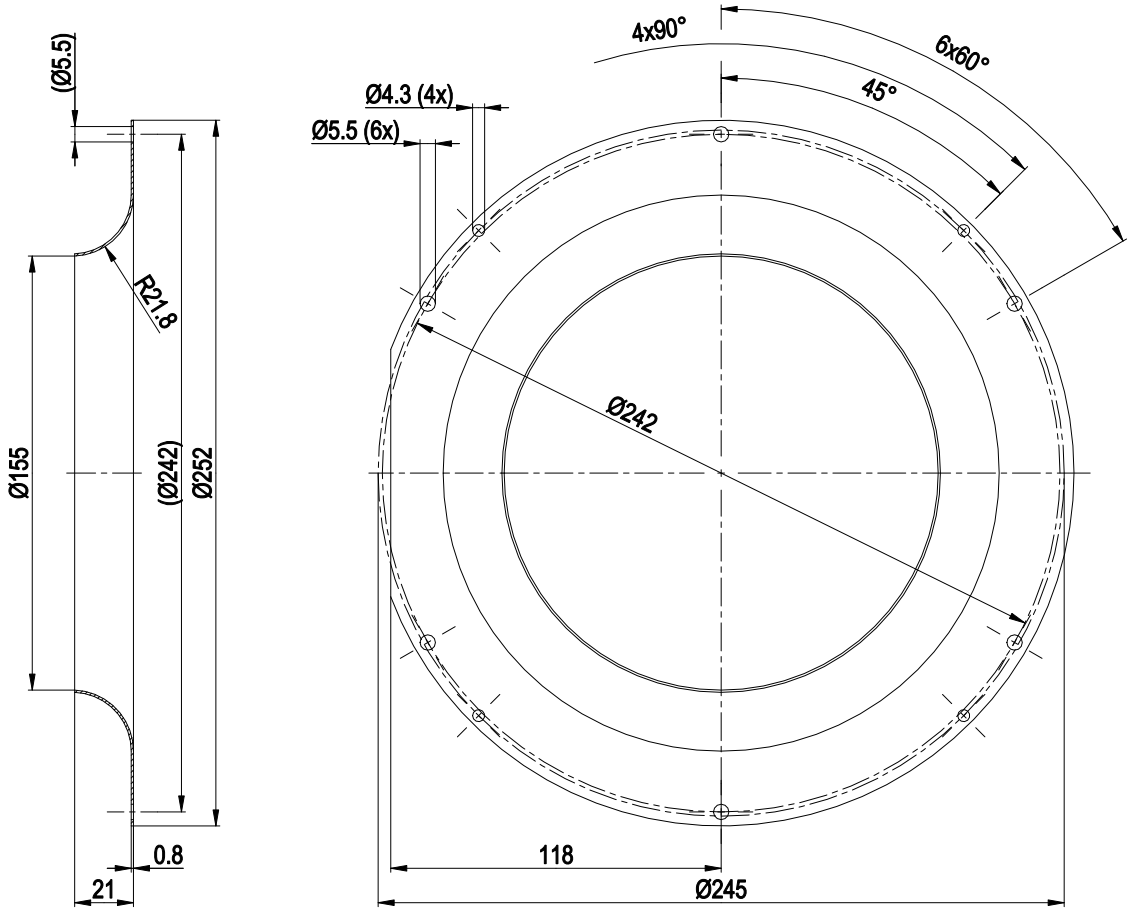
1	Accessory part: inlet ring 09609-2-4013 not included in scope of delivery
2	Max. clearance for screw 6 mm
3	Cable FLRYW 4x 0.75 mm²
	4x splice

EC centrifugal fan - RadiCal

backward-curved, single-intake

Automotive

Accessory part



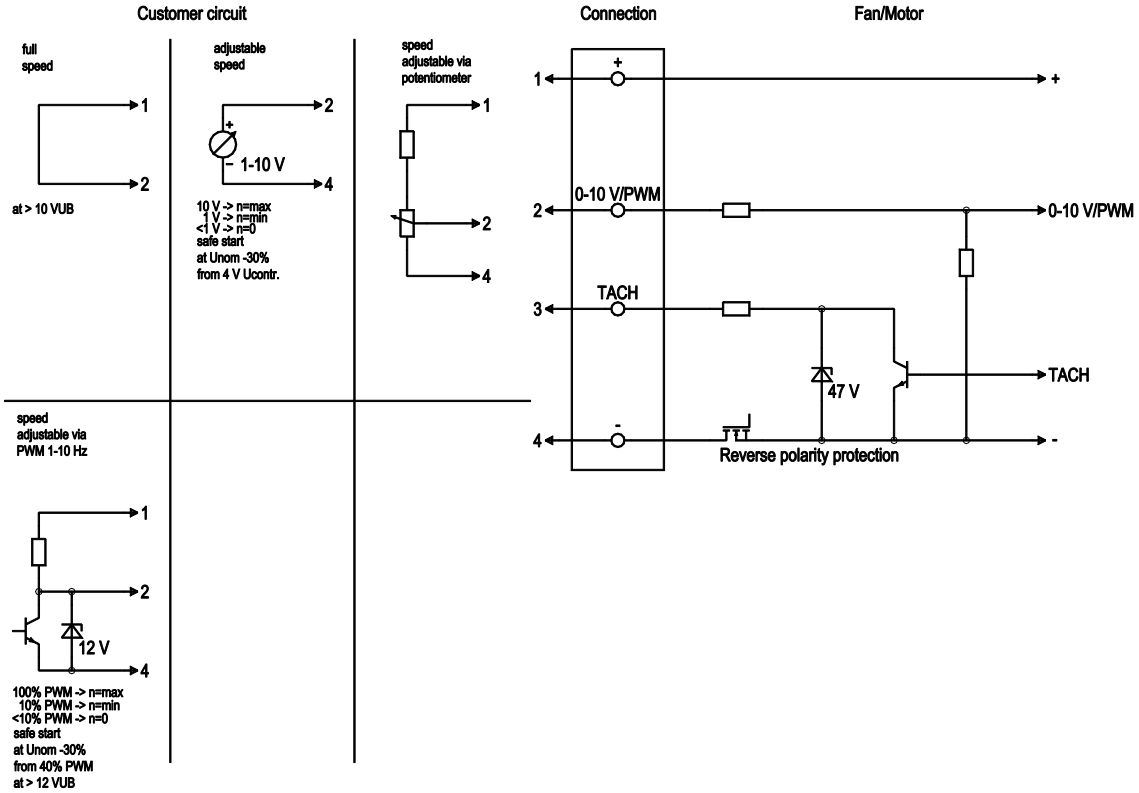
Inlet ring 09609-2-4013 not included in scope of delivery

EC centrifugal fan - RadiCal

backward-curved, single-intake

Automotive

Connection diagram



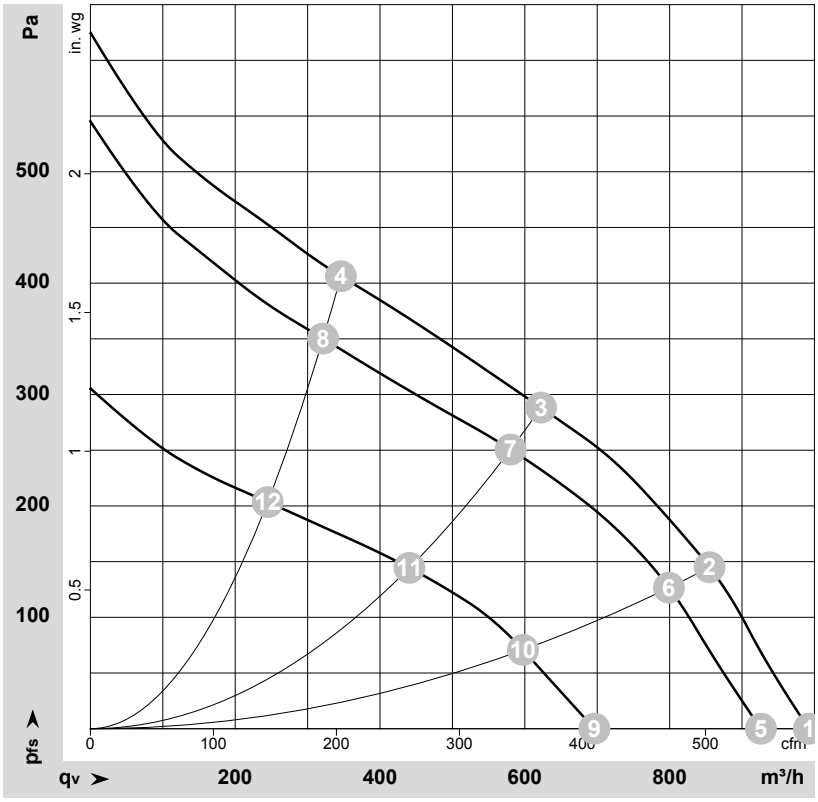
No.	Conn.	Designation	Color	Function/assignment
	1	Un +12VDC	red	Power supply 12 VDC, see nameplate for voltage range, maximum ripple 3.5%
	2	PWM/LIN	yellow	Control input Re > 40k (PWM 1-10 kHz / 0-10 V)
	3	Tacho	white	Tach output, 3 pulses per revolution, Isink max = 10 mA
	4	GND	blue	Reference ground

EC centrifugal fan - RadiCal

backward-curved, single-intake

Automotive

Curves: Air performance



ρ = 1.15 kg/m³ ± 2 %

Measurement: LU-184279-1
Measurement: LU-183585-1
Measurement: LU-184278-1

Air performance measured according to ISO 5801 installation category A. For detailed information on the measurement setup, contact ebm-papst. Intake sound level: Sound power level according to ISO 13347 / sound pressure level measured at 1 m distance from fan axis. The values given are valid under the specified measuring conditions and may vary due to conditions of installation. For deviations from the standard configuration, the parameters have to be checked on the installed unit.

Measured values

	U	n	P_{ed}	I	LpA_{in}	LwA_{in}	q_V	p_{fs}	q_V	p_{fs}
	V	min^{-1}	W	A	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	16	2905	110	8.77			990	0	585	0.00
2	16	2855	112	9.01			855	146	505	0.59
3	16	2790	117	9.43			620	288	365	1.16
4	16	2890	113	9.01			345	406	205	1.63
5	12	2700	90	8.60	66	74	925	0	545	0.00
6	12	2670	92	8.84	63	71	800	125	470	0.50
7	12	2600	96	9.25	58	66	580	250	340	1.00
8	12	2685	92	8.80	62	69	320	350	190	1.41
9	8	2065	42	5.97			695	0	410	0.00
10	8	2030	43	6.16			595	71	350	0.29
11	8	1990	44	6.39			440	144	260	0.58
12	8	2040	43	6.14			245	204	145	0.82

U = Voltage · n = Speed (rpm) · P_{ed} = Power consumption · I = Current draw · LpA_{in} = Sound pressure level intake side · LwA_{in} = Sound power level intake side · q_V = Air flow
p_{fs} = Pressure increase